



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,069	06/09/2005	Katsumi Sakitani	4633-0138PUS1	8925
2292	7590	05/03/2007		
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER TRIEU, THERESA	
			ART UNIT 3748	PAPER NUMBER
			NOTIFICATION DATE 05/03/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/538,069

Applicant(s)

SAKITANI ET AL.

Examiner

Theresa Trieu

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) 4, 5 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on June 9, 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date June 9, 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to the applicants' election filed on March 15, 2007.

Election/Restrictions

1. Applicant's election without traverse of the species of Figs. 1-14, claims 1, 2, 3, 6, 8 and 9 being readable thereon, in the reply filed on March 15, 2007 is acknowledged.

Accordingly claims 4, 5 and 7 stand withdrawn as being directed to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, 8 and 9 rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa et al. (Ogawa) (Publication Number JP 2000-227080).

Regarding claims 1-3, as shown in Figs. 5 and 9, Ogawa discloses a displacement type expansion machine which is equipped with an expansion mechanism (23) in which power is generated as a result of expansion of high-pressure fluid supplied to an expansion chamber (10), wherein: a communicating passage (16a, 16b), for establishing fluid communication from a fluid outflow side of the expansion chamber (10) to an expansion-process intermediate position of the expansion chamber (10), is provided, and the communicating passage (16a, 16b) is provided with an opening/closing mechanism (14); wherein the opening/closing mechanism (14) being formed by a check valve which permits fluid flow in a direction from the fluid outflow side of the

Art Unit: 3748

expansion chamber (10) towards the expansion-process intermediate position of the expansion chamber (10), but prevents fluid flow in a direction from the expansion-process intermediate position of the expansion chamber (10) toward the fluid outflow side of the expansion chamber (10); wherein the check valve (14) being formed by a spring return type check valve which is configured so as to enter the open state whenever fluid pressure at the expansion-process intermediate position of the expansion chamber (10) falls below fluid pressure at the fluid outflow side of the expansion chamber (10) by more than a predetermined amount.

Regarding claims 8 and 9, Ogawa discloses a fluid machine comprising a casing (1) which houses therein a displacement type expansion machine (23), an electric motor (21), and a compressor (20) which compresses fluid by being activated by said displacement type expansion machine (23) and said electric motor (21), wherein said displacement type expansion machine (23) is a rotary type expansion mechanism.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 3748

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa.

Ogawa discloses the invention as recited above; however, Ogawa fails to disclose the expansion mechanism being configured to perform an expansion stroke of a vapor compression refrigerating cycle.

It is examiner's position that one having ordinary skill in the displacement type expansion art, would have found it obvious to utilize the expansion mechanism performing an expansion stroke of a vapor compression refrigerating cycle, since they are merely design parameters, depending on being used for a particular purpose or solving a stated problem. Moreover, there is nothing in the record which establishes that the claimed the expansion mechanism for performing an expansion stroke of a vapor compression refrigerating cycle, presents a novel of unexpected result (See *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975)).

Prior Art

The IDS (PTO-1449) filed on June 9, 2005 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents: Kinney (U.S. Patent Number 1,623,316), Umetsu (U.S. (Publication Number JP 61-129495), Hokotani et al. (Publication Number JP 2002-364563), and Yang (Publication Number CN 1693820), each further discloses a state of the art.

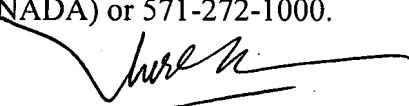
Art Unit: 3748

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 571-272-4868. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT
April 27, 2007



Theresa Trieu
Primary Examiner
Art Unit 3748